COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER SUPPLY AND WASTEWATER MANAGEMENT

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM DISCHARGE REQUIREMENTS FOR PUBLICLY OWNED TREATMENT WORKS (POTWs)

NPDES PERMIT NO: PA0026689

In compliance with the provisions of the Clean Water Act, 33 U.S.C. Section 1251 *et seq.* ("the Act") and Pennsylvania's Clean Streams Law, as amended, 35 P.S. Section 691.1 *et seq*.,

City of Philadelphia Water Department - Client ID No. 78267

1101 Market Street, 5th Floor

Philadelphia, PA 19107-2994

is authorized to discharge from a facility known as **Northeast Water Pollution Control Plant - Site ID No. 451953**, located at **3899 Richmond Street, Philadelphia**, **Philadelphia County** to the **Delaware River Estuary Zone - 3 (Outfall 001, CSO Outfalls 002-008, 010-022, and 058), Pennypack Creek (CSO Outfalls 023-027), Tacony Creek (CSO Outfalls 028-041 and 059) and Frankford Creek (CSO Outfalls 042-052, 054-057, 060, and Stormwater Outfall 061)** in Watershed **3J** in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts A, B and C hereof.

THIS PERMIT SHALL BECOME EFFECTIVE ON

THIS PERMIT SHALL EXPIRE AT MIDNIGHT ON

The authority granted by this permit is subject to the following further qualifications:

1. If there is a conflict between the application, its supporting documents and/or amendments and the terms and conditions of this permit, the terms and conditions shall apply.

2. Failure to comply with the terms, conditions or effluent limitations of this permit is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

3. A complete application for renewal of this permit, or notice of intent to cease discharging by the expiration date, must be submitted to DEP at least 180 days prior to the above expiration date (unless permission has been granted by DEP for submission at a later date), using the appropriate NPDES permit application form.

   In the event that a timely and complete application for renewal has been submitted and DEP is unable, through no fault of the permittee, to reissue the permit before the above expiration date, the terms and conditions of this permit, including submission of the Discharge Monitoring Reports (DMRs), will be automatically continued and will remain fully effective and enforceable against the discharger until DEP takes final action on the pending permit application.

4. This NPDES permit does not constitute authorization to construct or make modifications to wastewater treatment facilities necessary to meet the terms and conditions of this permit.

DATE PERMIT ISSUED _____ **ISSUED BY** _____

DATE PERMIT AMENDMENT ISSUED _____ **TITLE: Water Management Program Manager**

Permit No. PA0026689

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

I. For Outfall 001 **, Latitude** 39°58'51" **, Longitude** 75°04'35" **, River Mile Index** 104.2 **, Stream Code** 00002

which receives wastewater from **Northeast Water Pollution Control Plant**

a. The permittee is authorized to discharge during the period from issuance through expiration.

b. Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements, Footnotes and Supplemental Information).

Discharge Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (3) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Average Monthly	Average Weekly	Max Daily	Instantaneous Maximum (2)		
Flow (MGD)	Monitor/Report	Monitor/Report Max Daily					Continuous	Meter
pH (STD)				6.0 Inst Min		9.0	Daily	Grab
$CBOD_5$	36,430	54,645	25	40		50	Daily	24-Hour Comp.
$CBOD_5$ (% Removal)	≥86						Daily	24-Hour Comp.
$CBOD_{20}$	71,760						2/Week	24-Hour Comp.
Total Suspended Solids	52,540	78,810	30	45		60	Daily	24-Hour Comp.
Total Suspended Solids (% Removal)	≥85						Daily	24-Hour Comp.
Fecal Coliform (Issuance thru Year 2)			200			Monitor/Report	Daily	Grab
Fecal Coliform #/100 ml (Year 3 thru Expiration)			200			1,000*	Daily	Grab
Dissolved Oxygen			Monitor/Report	Monitor/Report Inst. Min.			Daily	Grab
Total Residual Chlorine			0.5			1.0	Daily	Grab
Ammonia as N			Monitor/Report		Monitor/Report		1/Week	24-Hour Comp.
Nitrite as N			Monitor/Report		Monitor/Report		1/Week	24-Hour Comp.
Nitrate as N			Monitor/Report		Monitor/Report		1/Week	24-Hour Comp.
Total Phosphorus as P			Monitor/Report		Monitor/Report		1/Week	24-Hour Comp.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): Outfall 001, at the pier effluent sampling building or at the chlorine contact tank outfall if pier location is not usable.

*Shall not exceed in more than 10 percent of the samples.

Permit No. PA0026689

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

I. For Outfall 001 **, Latitude** 39°58'51" **, Longitude** 75°04'35" **, River Mile Index** 104.2 **, Stream Code** 00002

which receives wastewater from **Northeast Water Pollution Control Plant**

a. The permittee is authorized to discharge during the period from issuance through expiration.

b. Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements, Footnotes and Supplemental Information).

Discharge Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (3) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Inst Minimum	Average Monthly	Max Daily	Instantaneous Maximum		
Total Kjeldahl Nitrogen				Monitor/Report	Monitor/Report		1/Week	24-Hour Comp.
Whole Effluent Toxicity (Chronic)					Monitor/Report		1/Quarter	24-Hour Comp.
Whole Effluent Toxicity (Acute)					Monitor/Report		1/Quarter	24-Hour Comp.
Copper, Total				Monitor/Report			1/Month	24-Hour Comp.
Lead, Total				Monitor/Report			1/Month	24-Hour Comp.
Zinc, Total				Monitor/Report			1/Month	24-Hour Comp.
Phenols, Total				Monitor/Report			1/Month	24-Hour Comp.
Iron, Total				Monitor/Report			1/Month	24-Hour Comp.
Iron, Dissolved				Monitor/Report			1/Month	24-Hour Comp.
Chloroform				Monitor/Report			1/Month	Grab
Chlorodibromomethane				Monitor/Report			1/Month	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): Outfall 001, at the pier effluent sampling building or at the chlorine contact tank outfall if pier location is not usable.

Permit No. PA0026689

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

I. For Outfall 001 **, Latitude** 39°58'51" **, Longitude** 75°04'35" **, River Mile Index** 104.2 **, Stream Code** 00002

which receives wastewater from **Northeast Water Pollution Control Plant**

a. The permittee is authorized to discharge during the period from issuance through expiration.

b. Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements, Footnotes and Supplemental Information).

Discharge Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (3) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Average Weekly	Instantaneous Maximum (2)		
1,2-Dichloroethane				Monitor/Report			1/Month	Grab
Tetrachloroethylene				Monitor/Report			1/Month	Grab
Trichloroethylene				Monitor/Report			1/Month	Grab
4-4' DDE				Monitor/Report			1/Quarter	24-Hour Comp.
4-4' DDT				Monitor/Report			1/Quarter	24-Hour Comp.
4-4' DDD				Monitor/Report			1/Quarter	24-Hour Comp.
Benzidine				Monitor/Report			1/Quarter	24-Hour Comp.
3-3' Dichlorobenzidine				Monitor/Report			1/Quarter	24-Hour Comp.
Alpha - BHC				Monitor/Report			1/Quarter	24-Hour Comp.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): Outfall 001, at the pier effluent sampling building or at the chlorine contact tank outfall if pier location is not usable.

Permit No. PA0026689

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

I. For Outfall 001 **, Latitude** 39°58'51" **, Longitude** 75°04'35" **, River Mile Index** 104.2 **, Stream Code** 00002

which receives wastewater from **Northeast Water Pollution Control Plant**

a. The permittee is authorized to discharge during the period from issuance through expiration.

b. Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements, Footnotes and Supplemental Information).

Discharge Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (3) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Average Weekly	Instantaneous Maximum (2)		
Beta - BHC				Monitor/Report			1/Quarter	24-Hour Comp.
Dieldrin				Monitor/Report			1/Quarter	24-Hour Comp.
Endrin				Monitor/Report			1/Quarter	24-Hour Comp.
Chlordane				Monitor/Report			1/Quarter	24-Hour Comp.
Heptachlor				Monitor/Report			1/Quarter	24-Hour Comp.
Lindane				Monitor/Report			1/Quarter	24-Hour Comp.
PCBs, Total				Monitor/Report			2/Year*	24-Hour Comp.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): Outfall 001, at the pier effluent sampling building or at the chlorine contact tank outfall if pier location is not usable.

*Consistence with DRBC requirements (2-day weather and 2 wet weather per year).

Re 30 (CD05)118D

Permit No. PA0026689

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

I. For Outfall 061 **, Latitude** 39°59'54" **, Longitudes** 75°04'36" **, River Mile Indexes** 0.50 **, Stream Codes** 02389

which receives stormwater from **Northeast Water Pollution Control Plant Area**

a. The permittee is authorized to discharge during the period from issuance through expiration.

b. Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements, Footnotes and Supplemental Information).

Discharge Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (3) Measurement Frequency	Required Sample Type
	Monthly Average	Weekly Average	Minimum	Monthly Average	Daily Maximum	Instantaneous Maximum (2)		
$CBOD_5$					Monitor/Report		1/Year	Grab
COD					Monitor/Report		1/Year	Grab
pH					Monitor/Report		1/Year	Grab
Total Suspended Solids					Monitor/Report		1/Year	Grab
Total Kjeldahl Nitrogen					Monitor/Report		1/Year	Grab
Total Phosphorus					Monitor/Report		1/Year	Grab
Fecal Coliform					Monitor/Report		1/Year	Grab
Oil and Grease					Monitor/Report		1/Year	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): Outfall 061.

Permit No. PA0026689

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

I.

Outfall	Interceptor/Regulator Location	Latitude	Longitude	Name of Receiving Stream
002	Castor Avenue & Balfour Street (D-17)	39°58'50"	75°04'58"	Delaware River
003	Venango Street NW of Casper Street (D-18)	39°58'45"	75°05'06"	Delaware River
004	Tioga Street NW of Casper Street (D-19)	39°58'41"	75°05'15"	Delaware River
005	Ontario Street NW of Casper Street (D-20)	39°58'43"	75°05'28"	Delaware River
006	Westmoreland Street NW of Balfour Street (D-21)	39°58'44"	75°05'41"	Delaware River
007	Allegheny Avenue SE of Bath Street (D-22)	39°58'42"	75°05'53"	Delaware River
008	Indiana Avenue SE of Allen Street (D-23)	39°58'38"	75°06'12"	Delaware River
010	Somerset Street E of Richmond Street (D-25)	39°58'38"	75°06'28"	Delaware River
010	Cambria Street E of Melvale Street (D-24)	39°58'38"	75°06'28"	Delaware River
011	Cottman Street SE of Milnor Street (D-2)	40°01'18"	75°01'44"	Delaware River
012	Princeton Avenue SE of Milnor Street (D-3)	40°01'14"	75°02'00"	Delaware River
013	Disston Street SE of Wissinoming Street (D-4)	40°01'08"	75°02'13"	Delaware River
014	Magee Street SE of Milnor Street (D-5)	40°00'58"	75°02'34"	Delaware River
015	Levick Street SE of Milnor Street (D-6)	40°00'53"	75°02'46"	Delaware River
016	Lardner Street SE of Milnor Street (D-7)	40°00'44"	75°03'05"	Delaware River
017	Comly Street SE of Milnor Street (D-8)	40°00'38"	75°03'13"	Delaware River
018	Dark Run Lane SE of Milnor Street (D-9)	40°00'34"	75°03'18"	Delaware River
019	Sanger Street SE of Milnor Street (D-11)	40°00'21"	75°03'28"	Delaware River
020	Bridge Street SE of Garden Street(D-12)	40°00'02"	75°03'43"	Delaware River
021	Kirkbride Street & Delaware Avenue (D-13)	39°59'53"	75°03'47"	Delaware River
022	Orthodox Street & Delaware Avenue (D-15)	39°59'24"	75°04'04"	Delaware River
058	Levick Street & Everett Avenue (R-13	40°00'30"	75°03'20"	Delaware River
058	Levick Street & Frontenac Street (R-13A)	40°00'30"	75°03'20"	Delaware River
058	Oakland Street & Benner Street (R-14)	40°00'30"	75°03'20"	Delaware River
023	Frankford Avenue & Ashburner Street (P-1)	40°02'36"	75°01'15"	Pennypack Creek
024	Frankford Avenue & Holmesburg Avenue (P-2)	40°02'36"	75°01'16"	Pennypack Creek
025	Torresdale Avenue NW of Pennypack Creek (P-3)	40°02'13"	75°01'19"	Pennypack Creek
026	Cottage Street & Holmesburg Avenue (P-4)	40°02'23"	75°01'21"	Pennypack Creek
027	Holmesburg Avenue SE of Hegerman Street (P-5)	40°02'02"	75°01'21"	Pennypack Creek
028	Williams Avenue SE of Sedgewick (T-1)	40°04'34"	75°09'44"	Tacony Creek
029	Champlost Avenue W of Tacony Creek (T-3)	40°02'28"	75°06'56"	Tacony Creek
030	Rising Sun Avenue E of Tacony Creek (T-4)	40°02'11"	75°06'48"	Tacony Creek
031	Rising Sun Avenue W of Tacony Creek (T-5)	40°02'09"	75°06'48"	Tacony Creek
032	Bingham Street E of Tacony Creek (T-6)	40°02'03"	75°06'41"	Tacony Creek
033	Tabor Road W of Tacony Creek (T-7)	40°01'51"	75°06'43"	Tacony Creek

Continued on page 8

Permit No. PA0026689

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

I.

Outfall	Interceptor Regulator Location	Latitude	Longitude	Name of Receiving Stream
034	Ashdale Street W of Tacony Creek (T-8)	40°01'42"	75°06'47"	Tacony Creek
035	Roosevelt Boulevard W of Tacony Creek (T-9)	40°01'37"	75°06'48"	Tacony Creek
036	Roosevelt Boulevard E of Tacony Creek (T-10)	40°01'37"	75°06'47"	Tacony Creek
037	Ruscomb Street E of Tacony Creek (T-11)	40°01'29"	75°06'43"	Tacony Creek
038	Whitaker Avenue E of Tacony Creek (T-12)	40°01'23"	75°06'41"	Tacony Creek
039	Whitaker Avenue W of Tacony Creek (T-13)	40°01'22"	75°06'42"	Tacony Creek
040	I Street & Ramona Avenue (T-14)	40°00'59"	75°06'28"	Tacony Creek
041	J Street & Juniata Park (T-15)	40°00'57"	75°06'20"	Tacony Creek
059	Nedro Avenue & 7th Street (R-15)	40°02'16"	75°06'53"	Tacony Creek
042	Castor Avenue at Unity Street Circle (F-3)	40°00'57"	75°05'51"	Frankford Creek
043	Wingohocking Street E of Adams Avenue (F-4)	40°00'52"	75°05'42"	Frankford Creek
044	Bristol Street W of Adams Avenue (F-5)	40°00'41"	75°05'41"	Frankford Creek
045	Worrell Street E of Frankford Creek (F-6)	40°00'25"	75°05'33"	Frankford Creek
046	Worrell Street W of Frankford Creek (F-7)	40°00'26"	75°05'34"	Frankford Creek
047	Torresdale Avenue & Hunting Park Avenue (F-8)	40°00'21"	75°05'36"	Frankford Creek
048	Frankford Avenue N of Frankford Creek (F-9)	40°00'19"	75°05'34"	Frankford Creek
049	Frankford Avenue S of Frankford Creek (F-10)	40°00'19"	75°05'35"	Frankford Creek
050	Orchard Street S of Vandike Street (F-11)	40°00'15"	75°05'26"	Frankford Creek
051	Sepviva Street N of Butler Street (F-12)	39°59'56"	75°05'14"	Frankford Creek
052	Bristol Street NW of Belgrade Street (F-14)	39°59'49"	75°05'03"	Frankford Creek
052	Duncan Street under Delaware Expressway (F-13)	39°59'49"	75°05'03"	Frankford Creek
054	Wakeling Street NW of Creek Basin (F-21)	40°00'16"	75°04'15"	Frankford Creek
055	Bridge Street NW of Creek Basin (F-23)	40°00'19"	75°04'05"	Frankford Creek
056	Bridge Street SE of Creek Basin (F-24)	40°00'18"	75°04'05"	Frankford Creek
057	Ash Street W of Creek Basin (F-25)	40°00'15"	75°04'15"	Frankford Creek
060	Castor Avenue & East Hunting Park Avenue (R-18)	40°00'36"	75°05'44"	Frankford Creek

which receives wastewater from **combined sewer overflow system**

a. The permittee is authorized to discharge during the period from issuance through expiration.

b. Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements, Footnotes and Supplemental Information).

1. These CSO outfalls are subject to terms and conditions as specified in Other Requirements No. 28.
2. There shall be no discharge during dry weather.

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS (Con't)

Additional Requirements

c. All discharges of floating materials, oil, grease, scum, foam, sheen, and substances which produce color, tastes, odors, turbidity or settle to form deposits shall be controlled to levels which will not be inimical or harmful to the water uses to be protected or to human, animal, plant or aquatic life.

Footnotes

(1) When sampling to determine compliance with mass effluent limitations, the daily discharge flow on the day that samples were collected must be measured and recorded.

(2) The Instantaneous Maximum Discharge Limitations are for compliance use by DEP only. Do not report instantaneous maximums on DMRs or supplemental DMRs unless specifically required on those forms to do so.

(3) This is the minimum number of sampling events required. Permittees are encouraged, and it may be advantageous in demonstrating compliance, to perform more than the minimum number of sampling events.

Supplemental Information

(1) The hydraulic design capacity of 210 million gallons per day for the treatment facility is used to prepare the annual Municipal Wasteload Management Report to help determine whether a "hydraulic overload" situation exists, as defined in Title 25 Pa. Code Chapter 94.

(2) The effluent limitations for this outfall were determined using an effluent discharge rate of 210 million gallons per day.

II. DEFINITIONS

At Outfall (XXX) means a sampling location in outfall line XXX below the last point at which wastes are added to outfall line (XXX), or where otherwise specified.

Average refers to the use of an arithmetic mean, unless otherwise specified in this permit.

Average Monthly Discharge Limitation means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month.

Average Weekly Discharge Limitation means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week.

Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures and other management practices to prevent or reduce the pollution to surface waters of the Commonwealth. BMPs also include treatment requirements, operating procedures and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Bypass means the intentional diversion of waste streams from any portion of a treatment facility.

Composite Sample (for all except GC/MS volatile organic analysis) means a combination of individual samples (at least eight for a 24-hour period or four for an 8-hour period) of at least 100 milliliters (mL) each obtained at spaced time intervals during the compositing period. The composite must be flow-proportional; either the volume of each individual sample is proportional to discharge flow rates, or the sampling interval is proportional to the flow rates over the time period used to produce the composite.

Composite Sample (for GC/MS volatile organic analysis) consists of at least four aliquots or grab samples collected during the sampling event (not necessarily flow proportioned). The samples must be combined in the laboratory immediately before analysis and then one analysis is performed.

Daily Average Temperature means the average of all temperature measurements made, or the mean value plot of the record of a continuous automated temperature recording instrument, either during a calendar day or during the operating day if flows are of a shorter duration.

Daily Discharge means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

Discharge Monitoring Report (DMR) means the form for the reporting of self-monitoring results by the permittee.

Estimated Flow means any method of liquid volume measurement based on a technical evaluation of the sources contributing to the discharge including, but not limited to, pump capabilities, water meters and batch discharge volumes.

Geometric Average means the average of a set of n sample results given by the nth root of their product.

Grab Sample means an individual sample of at least 100 mL collected at a randomly selected time over a period not to exceed 15 minutes.

Hazardous Substance means any substance designated under 40 CFR 116 pursuant to Section 311 of the Clean Water Act.

Immersion Stabilization (i-s) means a calibrated device is immersed in the wastewater until the reading is stabilized.

Industrial User or Indirect Discharger means an establishment that discharges or introduces industrial wastes into a Publicly Owned Treatment Works (POTW).

Maximum Any Time or Instantaneous Maximum means the level not to be exceeded at any time in any grab sample.

Maximum Daily Discharge Limitation means the highest allowable "daily discharge."

Measured Flow means any method of liquid volume measurement, the accuracy of which has been previously demonstrated in engineering practice, or for which a relationship to absolute volume has been obtained.

Publicly Owned Treatment Works (POTW) means a device or system used in the treatment (including recycling and reclamation) of municipal sewage or industrial wastes of a liquid nature which is owned by a state or municipality. The term includes sewers, pipes or other conveyances only if they convey wastewater to a POTW providing treatment.

Severe Property Damage means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

Stormwater means the runoff from precipitation, snow melt runoff, and surface runoff and drainage.

Stormwater Associated With Industrial Activity means the discharge from any conveyance which is used for collecting and conveying stormwater and which is directly related to manufacturing, processing or raw materials storage areas as defined at 40 CFR 122.26(b)(14).

Total Dissolved Solids means the total dissolved (filterable) solids as determined by use of the method specified in 40 CFR 136.

Toxic Pollutant means those pollutants, or combinations of pollutants, including disease-causing agents, which after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains may, on the basis of information available to DEP cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions, including malfunctions in reproduction, or physical deformations in these organisms or their offspring.

III. SELF-MONITORING, REPORTING AND RECORDKEEPING

A. Representative Sampling

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

2. Records Retention

   Except for records of monitoring information required by this permit related to the permittee's sludge use and disposal activities which shall be retained for a period of at least 5 years, all records of monitoring activities and results (including all original strip chart recordings for continuous monitoring instrumentation and calibration and maintenance records), copies of all reports required by this permit, and records of all data used to complete the application for this permit shall be retained by the permittee for 3 years from the date of the sample measurement, report or application. The 3-year period shall be extended as requested by DEP or the EPA Regional Administrator.

3. Recording of Results

   For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

   a. The exact place, date and time of sampling or measurements.
   b. The person(s) who performed the sampling or measurements.
   c. The date(s) the analyses were performed.
   d. The person(s) who performed the analyses.
   e. The analytical techniques or methods used; and the associated detection level.
   f. The results of such analyses.

4. Test Procedures

   Unless otherwise specified in this permit, the test procedures for the analysis of pollutants shall be those approved under 40 CFR 136 (or in the case of sludge use or disposal, approved under 40 CFR 136, unless otherwise specified in 40 CFR 503), or alternate test procedures approved pursuant to those parts, unless other test procedures have been specified in this permit.

5. Quality/Assurance/Control

   In an effort to assure accurate self-monitoring analyses results:

   a. The permittee, or its designated laboratory, shall participate in the periodic scheduled quality assurance inspections conducted by DEP and EPA.

   b. The permittee, or its designated laboratory, shall develop and implement a program to assure the quality and accurateness of the analyses performed to satisfy the requirements of this permit, in accordance with 40 CFR 136.

B. Reporting of Monitoring Results

1. The permittee shall effectively monitor the operation and efficiency of all wastewater treatment and control facilities, and the quantity and quality of the discharge(s) as specified in this permit.

2. Unless instructed otherwise in PART C of this permit, a properly completed DMR must be received by the following address within 45 days after the end of each monthly report period:

Department of Environmental Protection
Water Management Program
2 East Main Street
Norristown, PA 19401

Delaware River Basin Commission
P.O. Box 7360
West Trenton, NJ 08628

NPDES Enforcement Branch (3WP42)
Office of Permits and Enforcement
Water Protection Division
U.S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

3. The completed DMR Form shall be signed and certified either by the following applicable person, as defined in 40 CFR 122.22(a), or by that person's duly authorized representative, as defined in 40 CFR 122.22(b):

   - For a corporation - by a principal executive officer of at least the level of vice president, or an authorized representative, if the representative is responsible for the overall operation of the facility from which the discharge described in the NPDES form originates.
   - For a partnership or sole proprietorship - by a general partner or the proprietor, respectively.
   - For a municipality, state, federal or other public agency - by a principal executive officer or ranking elected official.

If signed by a person other than the above, written notification of delegation of DMR signatory authority must be submitted to DEP in advance of or along with the relevant DMR form.

4. If the permittee monitors any pollutant, using analytical methods described in PART A III.A.4. herein, more frequently than the permit requires, the results of this monitoring shall be incorporated, as appropriate, into the calculations used to report self-monitoring data on the DMR.

C. Reporting Requirements

1. Planned Changes - The permittee shall give notice to DEP as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

   a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b).

   b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in this permit, nor to notification requirements under 40 CFR 122.42(a)(1).

   c. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

2. Anticipated Noncompliance

   The permittee shall give advance notice to DEP of any planned changes in the permitted facility or activity that may result in noncompliance with permit requirements.

3. Unanticipated Noncompliance or Potential Pollution Reporting

   a. The permittee shall report any noncompliance, accident or incidents causing or threatening pollution pursuant to Title 25 Pa. Code §91.33 to DEP by telephone immediately giving the location and nature of the danger and, if reasonably possible to do so, to notify known downstream users of the waters.

   b. The permittee shall immediately take or cause to be taken steps necessary to prevent injury to property and downstream users of the waters from pollution or a danger of pollution and, in addition, within 15 days from the incident, shall remove any residual substances from the ground and affected waters to the extent required as stated in Title 25 Pa. Code §91.33.

   c. A written submission shall also be provided within 5 days of the time the permittee becomes aware of any noncompliance or incident causing or threatening pollution. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including the exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate and prevent reoccurrence of the noncompliance.

   d. DEP may waive the written report on a case-by-case basis for reports under paragraph C.3.c. of this section if the oral report was received immediately and no adverse impact has been reported.

4. Other Noncompliance

   The permittee shall report all instances of noncompliance not reported under paragraph C.3.a of this section, at the time DMRs are submitted. The reports shall contain the information listed in paragraph C.3.c. of this section.

PART B

I. MANAGEMENT REQUIREMENTS

A. Compliance Schedules

1. The permittee shall achieve compliance with the terms and conditions of this permit within the time frames specified in this permit.

2. The permittee shall submit reports of compliance or noncompliance, or progress reports as applicable, for any interim and final requirements contained in this permit. Such reports shall be submitted no later than 14 days following the applicable schedule date or compliance deadline.

B. Permit Modification, Termination, or Revocation and Reissuance

1. This permit may be modified, terminated, or revoked and reissued during its term in accordance with Title 25 Pa. Code Chapter 92.

2. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

3. In the absence of DEP action to modify or revoke and reissue this permit, the permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time specified in the regulations that establish those standards or prohibitions.

C. Duty to Provide Information

1. The permittee shall furnish to DEP, within a reasonable time, any information which DEP may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit.

2. The permittee shall furnish to DEP, upon request, copies of records required to be kept by this permit.

3. Other Information - Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to DEP, it shall promptly submit the correct and complete facts or information.

4. The permittee shall provide the following information in the POTW's annual Municipal Wasteload Management Report, required under the provisions of Title 25 Pa. Code Chapter 94.

   a. A new introduction of pollutants into the POTW from an "Indirect Discharger" which would be subject to Sections 301 and 306 of the Clean Water Act if it were directly discharging pollutants.

   b. A substantial change in the volume or character of pollutants being introduced into the POTW by an "Indirect Discharger" introducing pollutants into the POTW at the time of issuance of this permit.

   c. Information on the quality and quantity of the effluent introduced into the POTW and the anticipated impact of the change in the quality and quantity of effluent to be discharged from the POTW.

   d. The identity of the industrial users served by the POTW which are subject to pretreatment standards adopted under Section 307(b) of the Clean Water Act; the POTW shall also specify the total volume of discharge and estimate concentration of each pollutant discharged into the POTW by the industrial user.

   e. The POTW shall require all industrial users to comply with the reporting requirements of Sections 204(b), 307, and 308 of the Clean Water Act and regulations thereunder.

D. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes, but is not limited to, adequate laboratory controls including appropriate quality assurance procedures. This provision also includes the operation of backup or auxiliary facilities or similar systems that are installed by the permittee, only when necessary to achieve compliance with the terms and conditions of this permit.

E. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge, sludge use or disposal in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

F. Bypassing

1. Bypassing Not Exceeding Permit Limitations - The permittee may allow a bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are subject to the reporting and notification requirements of Part A.III.C.4. (Other Noncompliance).

2. Other Bypassing - In all other situations, bypassing is prohibited and DEP may take enforcement action against the permittee for bypass unless:

   a. A bypass is unavoidable to prevent loss of life, personal injury or "severe property damage."

   b. There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance.

   c. The permittee submitted the necessary notice required in F.4.a. and b. below.

3. DEP may approve an anticipated bypass, after considering its adverse effects, if DEP determines that it will meet the conditions listed in F.2. above.

4. Notice

   a. Anticipated Bypass – If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible, at least 10 days before the bypass.

   b. Unanticipated Bypass – The permittee shall submit notice of an unanticipated bypass causing or threatening pollution as required in PART A III.C.3. (Unanticipated Noncompliance or Potential Pollution Reporting) and other bypass as required in C.4. (Other Noncompliance).

II. PENALTIES AND LIABILITY

A. Violations of Permit Conditions

Any person violating Sections 301, 302, 306, 307, 308, 318 or 405 of the Clean Water Act or any permit condition or limitation implementing such sections in a permit issued under Section 402 of the Act is subject to civil, administrative and/or criminal penalties as set forth in 40 CFR 122.4l(a)(2).

Any person or municipality who violates any provision of this permit; any rule, regulation or order of DEP; or any condition or limitation of any permit issued pursuant to the Clean Streams Law, is subject to criminal and/or civil penalties as set forth in Sections 602, 603 and 605 of the Clean Streams Law.

B. Falsifying Information

The Clean Water Act provides that any person who does any of the following:

- Falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit, or

- Knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit (including monitoring reports or reports of compliance or noncompliance), shall, upon conviction, be punished by a fine and/or imprisonment as set forth in 18 P.S. §4904 and 40 CFR 122.41(j)(5) and (k)(2).

C. Liability

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance pursuant to Section 309 of the Clean Water Act or Sections 602, 603 or 605 of the Clean Streams Law.

Nothing in this permit shall be construed to preclude the institution of any legal action or to relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject to under the Clean Water Act and the Clean Streams Law.

D. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

III. OTHER RESPONSIBILITIES

A. Right of Entry

Pursuant to Sections 5(b) and 305 of Pennsylvania's Clean Streams Law, and Title 25 Pa. Code Chapter 92 and 40 CFR 122.41(i), the permittee shall allow authorized representatives of DEP and EPA, upon the presentation of credentials and other documents as may be required by law:

1. To enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

2. To have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

3. To inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit; and

4. To sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act or the Clean Streams Law, any substances or parameters at any location.

B. Transfer of Permits

1. Transfers by modification. Except as provided in paragraph 2 of this section, a permit may be transferred by the permittee to a new owner or operator only if this permit has been modified or revoked and reissued, or a minor modification made to identify the new permittee and incorporate such other requirements as may be necessary under the Clean Water Act.

2. Automatic transfers. As an alternative to transfers under paragraph 1 of this section, any NPDES permit may be automatically transferred to a new permittee if:

   a. The current permittee notifies DEP at least 30 days in advance of the proposed transfer date in paragraph 2.b. of this section;

   b. The notice includes the appropriate DEP transfer form signed by the existing and new permittees containing a specific date for transfer of permit responsibility, coverage and liability between them; and

   c. If DEP does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue this permit, the transfer is effective on the date specified in the agreement mentioned in paragraph 2.b. of this section.

3. In the event DEP does not approve transfer of this permit, the new owner or controller must submit a new permit application.

C. Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.

D. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.

E. Other Laws

The issuance of this permit does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations.

PART C

I. OTHER REQUIREMENTS

1. Notification of the designation of the responsible operator must be submitted to the permitting agency by the permittee within 60 days after the effective date of the permit and from time to time thereafter as the operator is replaced.

2. For reporting purposes on the DMR, the term “average weekly” shall mean the highest average weekly value observed during the monthly monitoring period.

3. If, at anytime, the DEP determines that the discharge permitted herein creates a public nuisance or causes environmental harm to the receiving water of the Commonwealth, the DEP may require the permittee to adopt such remedial measures as will produce a satisfactory effluent. If the permittee fails to adopt such remedial measures within the time specified by the DEP, the right to discharge herein granted shall, upon notice by the DEP, cease and become null and void.

4. No stormwater from pavements, areaways, roofs, foundation drains, or other sources shall be admitted to the sanitary sewers associated with the herein approved discharge except in cases where excessive pollutants would otherwise enter a stormwater conduit or stream. In such cases, the City of Philadelphia may approve and/or direct in writing the admittance of the expected excessive polluted stormwater to the separate sanitary sewer.

5. The approval herein given is specifically made contingent upon the permittee acquiring all necessary property rights by easement or otherwise, providing for the satisfactory construction, operation, maintenance, and replacement of all sewers or sewerage structures associated with the herein approved discharge in, along, or across private property, with full rights of ingress, egress, and regress.

6. The TSS in the raw wastewater shall be reduced by at least 85 percent as a monthly average in accordance with the requirements of the Delaware River Basin Commission (DRBC).

7. The $CBOD_5$ in the raw wastewater shall be reduced by at least 86 percent as a monthly average in accordance with the requirements of the DRBC for Zone 3 of the Delaware Estuary.

8. Analysis for the following pollutant(s) shall be performed using the following test method(s) contained in 40 C.F.R. Part 136, Guidelines Establishing Test Procedures for the Analysis of Pollutants, or any approved test method(s) of equal or greater sensitivity:

Parameter	Test Method
Copper, Total	220.2 (AA, Furnace)
Lead, Total	239.2 (AA, Furnace)
Zinc, Total	200.7 ICP
Chloroform	601 - GC/Hal.
Chlorodibromomethane	601 - GC/Hal.
1,2-Dichloroethane	601 - GC/Hal.
Tetrachloroethylene	601 - GC/Hal.
Trichloroethylene	601 - GC/Hal.
Benzidine	605 - HPLC
3-3' Dichlorobenzidine	605 - HPLC
Alpha - BHC	608 - GC/ECD
Beta - BHC	608 - GC/ECD
Dieldrin	608 - GC/ECD
Endrin	608 - GC/ECD
4-4' DDT	608 - GC/ECD
4-4' DDE	608 - GC/ECD

Parameter	Test Method
4-4' DDD	608 - GC/ECD
Heptachlor	608 - GC/ECD
Chlordane	608 - GC/ECD

A reporting limit of 1 microgram per liter is set for all volatile organics listed above. If an alternate test method other than Method 601 can achieve the required report limit, the permittee may submit a request to the DRBC to use the alternate test method. The alternate test method procedures and the results of a lab demonstration confirming that the reporting limit can be met shall accompany the request.

9. The permittee will ensure that applied chlorine dosages, used for disinfection or other purposes, are optimized to the degree necessary such that the total residual chlorine (TRC) in the discharge effluent does not cause an adverse stream impact. In doing so, the permittee shall consider relevant factors affecting required chlorine dosage, such as wastewater characteristics, mixing and contact times, desired result of chlorination, and expected impact on the receiving water body. The TRC data shall be recorded daily and maintained at the facility.

   If the DEP determines or receives documented evidence that levels of TRC in the permittee's effluent are causing adverse water quality impacts in the receiving water, the permittee shall be required to institute necessary additional steps to reduce or eliminate such impact.

10. Collected screenings, slurries, sludges, and other solids shall be handled and disposed of in compliance with 25 Pa. Code, Chapters 271, 273, 275, 283, and 285 (relating to permits and requirements for landfilling, land application, incineration, and storage of sewage sludge), Chapters 262, 263, and 264 (related to permits and requirements for landfilling and storage of hazardous sludge) and applicable Federal Regulations, the Federal Clean Water Act, RCRA, and their amendments.

11. The DEP may identify and require certain discharge specific data to be submitted before the expiration date of this permit. Upon notification by the DEP, the permittee will have 12 months from the date of the notice to provide the required data. These data, along with any other data available to the DEP, will be used in completing the Watershed TMDL/WLA Analysis and in establishing discharge effluent limits.

12. The permittee shall submit the results of chronic whole effluent toxicity testing with their next NPDES application, according to Federal Regulation 122.21(j)(5). The permittee shall submit the test results of a minimum four quarterly tests, from the year preceding the submission of the application. The permittee shall obtain the appropriate biomonitoring protocol for the testing from the DEP's Regional Office. The dilution series for the testing shall be 100, 50, 25, 12.5, and 6.25 percent, unless modified in writing by the DEP.

13. Chronic Whole Effluent Toxicity (WET) Monitoring

    A. General Requirements and Test Frequency

       The permittee shall conduct quarterly Whole Effluent Toxicity (WET) test starting within 90 days of the permit's effective date and continue until permit expiration to generate acute and chronic toxicity data on the cladoceran, (Ceriodaphnia dubia) and the fathead minnow (Pimephales promelas). The results shall be reported as No Observed Effect Concentration (NOEC) and Chronic Toxic Units (TU_c) with a Percent Minimum Significant Difference (PMSD) reported. The results shall also be reported as Inhibitory Concentration, 25 percent (IC_{25}).

       In lieu of conducting separate acute and chronic toxicity tests, the permittee may utilize the survival data from chronic toxicity tests to calculate 48-hour and 96-hour LC_{50} data. The 48-hour data, 96-hour LC_{50} data, and Acute Toxic Units (TU_a) shall also be reported with the chronic toxicity results.

       The dilution series to be used is 100, 50, 25, 12.5, and 6.25 percent.

The permittee shall follow appropriate test protocols or guidance described in Section C, Test Conditions and Methods, below.

B. Sample Collection

For each chronic testing event, three 24-hour flow proportioned, composite samples shall be collected over a seven-day exposure period. The samples must be collected at a frequency of not greater than every two hours and flow proportioned. In addition to the above samples, the permittee shall collect a flow proportioned composite sample made from the three 24-hour samples described above. The samples must be collected at the NPDES permit sampling point. The permittee shall collect chemical and physical data on the single effluent sample which represents each chronic testing event as specified in this permit.

C. Test Conditions and Methods

The permittee shall follow the DEP's "Biomonitoring WETT Data QA/QC Guidelines for Chronic Toxicity Testing with Amendments, March 20, 1995," attached and included in this permit condition, supplemented by Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, 4th Edition, October 2002 (EPA-821-R-02-013).

The permittee must notify the WET testing laboratory to specify the dilution series. If the DEP determines that the proper chronic test acceptability criteria are not met or the proper QA/QC conditions were not followed, the permittee must perform a retest within 30 days.

D. Chemical Analysis

The chemistry and physical tests including pH, total residual chlorine, dissolved oxygen, and temperature shall be performed for each sampling event, including each new batch of dilution water. The chemistry tests including conductivity, total alkalinity, total hardness, total ammonia (unionized ammonia), and Total Toxic Organics (TTO) as described in the Environmental Protection Agency's (EPA) Methods (above) shall be performed on the single effluent sample which represents each chronic testing event, including each new batch of dilution water (except TTO) in addition to the chemical analyses required above, those parameters listed in PART A and PART C of the NPDES permit for the outfall(s) tested will be analyzed concurrently with the WET test by using the method specified in the NPDES permit or, if not specified, by using EPA Methods at 40 C.F.R. Part 136; Standard Methods for the Examination of Water and Wastewater, American Public Health Association; and approved methods cited in 25 Pa. Code Chapter 16, Water Quality Toxics Management Strategy, Statement of Policy.

E. Chronic Toxicity Test Report Elements

At a minimum, the following must be reported with each chronic WET test:

1. General test description: origin and age of test organisms, dates and results of reference toxicant tests, light and temperature regimes, and other information on test conditions.

2. Completion of Ceriodaphnia dubia and Pimephales promelas coversheets (Forms 3620-FM-WQ0146 3/99 and 3620-FM-WQ0 145 3/99).

3. Description of sample collection procedures and of the sample location.

4. Names of individuals collecting and transporting samples, times and dates of sample collection and analysis, and temperature of sample upon receipt.

5. Description, time, and date of sample renewals.

6. All chemical and physical data, including method detection levels and observations made on the species. The chronic WET test hardness shall be reported with each test.

7. Copies of raw data sheets and/or bench sheets with data entries and signatures.

8. Dechlorination procedures with test statistical comparisons.

9. All observations or test conditions affecting the test outcome. All Type 1 or Type II errors must be explained.

10. The reference toxicant shall be identified and be a commonly used toxicant approved by EPA. Reports of reference toxicant tests shall include all information needed for the proper evaluation of the test. This includes the following: water chemistry parameters of controls and test concentrations; chronic endpoint with appropriate statistical analyses; and control charts (for point estimates, cumulative mean ± two standards deviations; for NOEC's central tendency ± one for concentration interval).

F. Submission of Test Reports

The permittee shall submit copies of all chronic WET test reports to DEP and DRBC at the addresses listed below within 30 days of the test completion:

Department of Environmental Protection
Southeast Regional Office
Water Management
2 East Main Street
Norristown, PA 19401

Dr. Thomas Fikslin
Delaware River Basin Commission
Operations Branch
P.O. Box 7360
West Trenton, NJ 08628-0360

14. REQUIREMENTS APPLICABLE TO STORMWATER OUTFALLS

A. Prohibition of Non-stormwater Discharges

1. Except as provided in A.2, all discharges to stormwater **Outfall 061** shall be composed entirely of non-polluting stormwater.

2. The following non-polluting water discharges may be authorized, provided the discharge is in compliance with D.2.b: discharges from fire fighting activities; fire hydrant flushings, potable water sources, including waterline flushings, irrigation drainage, lawn watering, routine external building washdown which does not use detergents or other compounds, pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used, air conditioning condensate, springs, uncontaminated groundwater, and foundation or footing drains where flows are not contaminated with process materials such as solvents.

B. Spills

This permit does not authorize the discharge of any polluting substances resulting from an on-site spill. Such spills shall be controlled through proper implementation of a Preparedness, Prevention, and Contingency (PPC) Plan as stated in Section D below.

C. This permit does not authorize any discharge (stormwater or non-stormwater) containing any pollutant that may cause or contribute to an impact on aquatic life or pose a substantial hazard to human health or the environment due to its quantity or concentration.

D. Preparedness, Prevention, and Contingency Plans

1. Development of Plan

Operators of facilities shall have developed a PPC Plan in accordance with 25 Pa. Code Section 91.34 and the "Guidelines for the Development and Implementation of Environmental Emergency Response Plans." The PPC Plan shall identify potential sources of pollution that may reasonably be expected to affect the quality of stormwater discharges from the facility. In addition, the PPC Plan shall describe the BMPs that are to be used to reduce the pollutants in stormwater discharges at the facility ensuring compliance with the terms and conditions of this permit. The PPC Plan shall be completed within 90 days from the permit effective date.

2. Non-stormwater Discharges

a. The PPC Plan shall contain a certification that the discharge has been tested or evaluated for the presence of non-stormwater discharges. The certification shall include the identification of potential significant sources of non-stormwater at the site, a description of the results of any test and/or evaluation for the presence of non-stormwater discharges, the evaluation criteria or testing methods used, the date of any testing and/or evaluation, and the on-site drainage points that were directly observed during the test. Such certification may not be feasible if the facility operating the stormwater discharge does not have access to an outfall, manhole, or other point of access to the ultimate conduit that receives the discharge. In such cases, the source identification section of the PPC Plan shall indicate why the certification was not feasible. A discharger that is unable to provide the certification must notify the DEP within 90 days of the effective date of this permit.

b. Except for flows from fire fighting activities, sources of non-stormwater listed in A.2. (authorized non-stormwater discharges) that are combined with stormwater discharges must be identified in the Plan. The Plan shall identify and ensure the implementation of appropriate pollution prevention measures for the non-stormwater component(s) of the discharge.

3. Special Requirements for SARA Title III, Section 313 Facilities

a. Facilities subject to SARA Title III, Section 313 shall include in the PPC Plan a description of releases to land or water of Section 313 water priority chemicals that have occurred within the last three years. Each of the following shall be evaluated for the reasonable potential for contributing pollutants to runoff: loading and unloading operations, outdoor storage activities, outdoor manufacturing or processing activities, significant dust or particulate generating process, and on-site waste disposal practices. Factors to consider include the toxicity of chemicals; quantity of chemicals used, produced or discharged; the likelihood of contact with stormwater; and history of significant leaks or spills of toxic or hazardous pollutants.

b. Engineering Certification. No stormwater PPC Plan for facilities subject to SARA Title III, Section 313 requirements for chemicals that are classified as "Section 313 water priority chemicals" shall be effective unless it has been reviewed by a Registered Professional Engineer and certified to by such Professional Engineer. A Registered Professional Engineer shall recertify the PPC Plan every year thereafter. This certification may be combined with the required annual evaluation in D.4. By means of these certifications, the engineer, having examined the facility and being familiar with the provisions of this part, shall attest that the storm water PPC Plan has been prepared in accordance with good engineering practices. Such certification shall in no way relieve the owner or operator of a facility covered by the PPC Plan of the duty to prepare and fully implement such Plan.

4. Comprehensive Site Compliance Evaluations and Recordkeeping

Qualified personnel shall conduct site compliance evaluations at least once a year. Such evaluations shall include:

a. Visual inspection and evaluation of areas contributing to a stormwater discharge for evidence of, or the potential for, pollutants entering the drainage system. Measures to reduce pollutant loadings shall be evaluated to determine whether they are adequate and properly implemented in accordance with the terms of the permit or whether additional control measures are needed. Structural stormwater management measures, sediment and erosion control measures, and other structural pollution prevention measures identified in the Plan shall be observed to ensure that they are operating correctly. A visual inspection of equipment needed to implement the Plan, such as spill response equipment, shall be made.

b. Based on the results of the inspection, the description of potential pollutant sources identified in the PPC Plan, and pollution prevention measures and controls identified in the Plan shall be revised as appropriate within 15 days of such inspection and shall provide for implementation of any changes to the Plan in a timely manner, but in no case more than 90 days after the inspection.

c. A report summarizing the scope of the inspection, using the DEP's Annual Inspection form shall be completed and made available upon request and retained as part of the PPC Plan for at least one year after coverage under this permit terminates.

E. Stormwater Management Best Management Practices (BMPs)

The permittee shall implement at least the following BMPs:

1. Manage sludge in accordance with all applicable permit requirements; temporarily collect and store sludge in enclosed containers or tanks.

2. Store chemicals in secure and covered areas on impervious surfaces away from storm drains.

3. Efficiently use herbicides for weed control; where practicable, investigate use of the least toxic herbicides; do not apply during windy conditions.

4. Do not wash parts or equipment over impervious surfaces that wash into storm drains.

5. Conduct Good Housekeeping Practices.

F. Stormwater Sampling and Reporting

1. If stormwater samples are required by this permit, they shall be collected as grab samples during the first 30 minutes, but no later than one-hour of the discharge resulting from a storm event that occurs at least 72 hours from the previously measurable storm event.

2. When the discharger is unable to collect samples due to adverse climatic conditions, the discharger must submit, in lieu of sampling data, a description of why samples could not be collected, including available documentation of the event. This sampling waiver may not be used more than once during a two-year period.

3. Stormwater monitoring results shall be summarized on a DMR form and the DEP's "Additional Information for the Reporting of Stormwater Monitoring" form.

4. When a facility has two or more outfalls that may reasonably be believed to discharge substantially identical effluents, based on a consideration of features and activities within the area drained by the outfall, the permittee may sample one such outfall and report that the quantitative data also applies to the substantially identical outfalls.

15. The facility shall be operated under the charge of a responsible operator(s) certified under the Pennsylvania Water and Wastewater Systems Operations Certification Act (Act 11). The operator(s) shall comply with the continuing education requirements required under the regulations and guidelines related to Act 11.

16. Instantaneous maximum limitations are imposed to allow for a grab sample to be collected by the appropriate regulatory agency to determine compliance. The permittee does not have to monitor for the instantaneous maximum limitation except for the parameters oil and grease, pH, and total residual chlorine. However, if grab samples are collected for parameters normally monitored through composite sampling, the results must be reported. The results of non-reportable samples shall not be used for compliance purposes.

17. The Operation and Implementation of a Pretreatment Program

1. General Requirements - The permittee shall operate and implement an industrial pretreatment program in accordance with the Federal Clean Water Act, the Pennsylvania Clean Stream Law, and the federal General Pretreatment Regulations at 40 C.F.R. 403. The program shall also be implemented in accordance with the pretreatment program and any modifications thereto submitted by the permittee and approved by the Approval Authority.

2. Annual Report and Other Requirements - The permittee shall submit an Annual Report by March 31 of each year to the DEP and EPA that describes the ermittee's pretreatment activities for the previous calendar year. The Annual Report shall include a description of pretreatment activities in all municipalities from which wastewater is received at the permittee's Publicly Owned Treatment Works (POTW). The submission to the DEP shall be incorporated into the permittee's Annual Municipal Wasteload Management Report required by 25 Pa. Code Chapter 94. In addition, the permittee shall meet all of the conditions specified below whether or not they relate to the Annual Report:

a. Control Mechanism Issuance - The Annual Report shall contain a summary of Significant Industrial User (SIU) control mechanism issuance, including a list of issuance and expiration dates for each SIU.

b. Sampling and Inspection - The Annual Report shall contain a summary of the number and type of inspections and samplings of SIUs by the permittee, including a list of all SIUs either not sampled or not inspected, and the reason that the sampling and/or inspection was not conducted.

c. Industrial User (IU) Compliance and POTW Enforcement - The Annual Report shall contain a summary of the number and type of violations of pretreatment standards and requirements, including local limits, and the actions taken by the permittee to obtain compliance, including civil penalty assessments and actions for injunctive relief. The report shall state whether each IU was in significant noncompliance, as that term is defined in 40 C.F.R. Section 403.8(f)(2)(viii).

d. Industrial Listing - The Annual Report shall contain an updated industrial listing showing all current SIUs and the categorical standard, if any, applicable to each. In addition, the report shall contain a summary of any trucked or hauled wastewater accepted at the plant, including the source of the wastewater (domestic or industrial), the amount of wastewater received on a monthly basis, any controls imposed on the users, and the discharge point designated by the POTW for acceptance of such wastewater.

e. Summary of POTW Operations - The Annual Report shall contain a summary of any interference, pass-through, or permit violations by the POTW which may be attributed to industrial users, and actions taken to address these events. The summary shall also include sampling and analysis of treatment plant influent, effluent, and sludge for toxic and incompatible pollutants, and an analysis of any trends in such data for the last three years.

f. Pretreatment Program Changes - The Annual Report shall contain a summary of any changes to the approved program and the date of submission to the Approval Authority.

g. Monitoring - The permittee shall conduct monitoring at its treatment plant that, at a minimum, includes monthly effluent and sludge analysis for all local limit parameters. A summary of this monitoring data shall be included in the annual report. In addition, monthly influent concentrations shall be calculated based on this effluent and sludge data for all local limit parameters that are conservative pollutants and the results included in the annual report.

3. Notification of Pass-Through or Interference - The permittee shall notify EPA and the DEP, in writing, of any instance of pass-through or interference related to an industrial discharge from an IU into the POTW. The notification shall be attached to the DMR submitted to the DEP and EPA and shall describe the incident, including the date, time, length, cause (including responsible user if known), and the steps taken by the permittee and IU (if identified) to address the incident. A copy of the notification shall also be sent to the EPA at the address provided below.

4. Headwork Analysis - The permittee shall submit to the DEP and EPA a reevaluation of its local limits based on a headworks analysis of its treatment plant within one (1) year of permit issuance. The list of pollutants to be evaluated, as well as a sampling plan for collection of necessary data, shall be submitted to the DEP and EPA within three (3) months of permit issuance. Within four (4) months of acceptance of the headwork analysis by the Approval Authority, the permittee shall adopt the revised local limits and notify all contributing municipalities of the need to adopt the revised local limits.

5. Changes to Pretreatment Program - The DEP and EPA may require the permittee to submit for approval changes to its pretreatment program if any one or more of the following conditions is present:

a. The program is not implemented in accordance with 40 C.F.R. Part 403.

b. Problems such as interference, pass-through or sludge contamination, develop or continue.

c. Federal, state, or local requirements change.

d. Changes are needed to assure protection of waters of the Commonwealth.

6. Procedure For Pretreatment Program Changes - Upon submittal by the permittee, and written notice of approval by the Approval Authority to the permittee of any changes to the permittee's approved pretreatment program, such changes are effective and binding upon the permittee.

7. Correspondence - The Approval Authority shall be EPA at the following address:

Pretreatment Coordinator
NPDES Permits Branch (3WP41)
Office of Permits and Enforcement
Water Protection Division
U.S. Environmental Protection Agency, Region III
1650 Arch Street
Philadelphia, PA 19103-2029

Copies of all correspondence and reports dealing with this program shall be sent to:

Department of Environmental Protection
Southeast Regional Office
Water Management Program
2 East Main Street
Norristown, PA 19401

18. Laboratory Certification

The Environmental Laboratory Accreditation Act of 2002 requires that all environmental laboratories register with the DEP. An environmental laboratory is any facility engaged in the testing or analysis of environmental samples required by a statute administered by the DEP relating to the protection of the environment or of public health, safety, and welfare.

19. In accordance with the city's NMCs and LTCP, the city will be reducing the frequency and volume of untreated sewage discharges through the combined sewer overflows (CSOs). In order to account for the increased loadings due to the combined sewage flows that exceed the treatment plant's rated hydraulic capacity, the following methods may be used for calculating and reporting mass loadings and effluent concentrations on the monthly discharge monitoring reports:

a. If a calendar month includes one or more days where flows exceed 315 mgd, a value of 85 percent may be used for those days for the purpose of calculating average monthly TSS percent removal. The actual TSS percent removal associated with those days shall be reported on the appropriate space provided on the DMR.

b. If a calendar month includes one or more days where flows exceed 315 mgd, a value of 86 percent may be used for those days for the purpose of calculating average monthly $CBOD_5$ percent removal. The actual $CBOD_5$ percent removal associated with those days shall be reported on the appropriate space provided on the DMR.

c. When daily flows exceed 315 mgd, the average monthly and average weekly TSS and $CBOD_5$ mass loadings for those days may be calculated by using the lesser of the actual load or the permit's allowable average monthly and average weekly limit respectively. The actual TSS and $CBOD_5$ loadings associated with those days shall be reported on the appropriate space provided on the DMR.

20. Operations and Maintenance Plan

The facility operator shall develop and update when there is significant revision to a treatment facility operations and maintenance plan. Said plan shall be made available for DEP review and if deemed necessary, a requested portion shall be submitted in writing or in an electronic format. For the purpose of this section, a key wastewater process includes equipment or process that if it fails could cause the discharge of raw wastewater, wastewater that fails to meet NPDES permit conditions, or a failure that could threaten human or environmental health. Included in this definition shall also be any piece of equipment or process that if it should fail, would cause the destruction of wastewater treatment process or equipment that would ultimately lead to the discharge of raw wastewater or wastewater that fails to meet NPDES permit conditions or any condition that may threaten human or environmental health. Said plan shall include:

- Process control strategy that includes a schedule for process control sampling, monitoring, testing, and recordkeeping. The process control strategy shall take into account the specific type of treatment system and shall monitor the efficiency of all biological and physical treatment units.

- A monitoring and compliance plan that details how key wastewater processes shall be monitored and adjusted while the facility is staffed. This plan must include standard operating procedures for any operator within the facility that makes process control decisions and has not been designated as the operator in responsible charge.

- For treatment plants that are impacted by wet weather flows, the operator shall develop and implement a wet weather operations strategy that minimizes or eliminates the wash out of solids from the treatment system while maximizing the flow through the treatment plant.

- An emergency operations plan that identifies how the facility will be operated during times of emergency. The plan should define the potential threats to the facility and how those threats are to be dealt with. The plan should be designed to minimize loss of life and property damage to the facility and should include preventative measures where appropriate. This plan shall also include emergency contact numbers for local emergency response, plant personnel, critical suppliers, vendors, and DEP contacts at a minimum.

- A preventative maintenance plan that includes a schedule for preventative maintenance for all equipment within the treatment system. A spare parts inventory shall be included as a part of this plan.

- An emergency maintenance plan that details how key processes will be repaired or replaced in the event of a failure.

- A solids management plan that details how solids produced by the facility will be wasted, treated, and ultimately disposed of.

21. Sludge Dewatering Summary Report

The permittee shall submit a monthly sludge dewatering summary report that includes:

a. Sludge flow to Biosolids Recycling Center (BRC) from the Northeast Water Pollution Control Plant.

b. Quantity of sludge processed by BRC.

22. The permittee shall operate the sewage treatment plant to provide treatment for the maximum design wastewater flows of 315 mgd (maximum daily average) and 420 mgd (peak) without causing treatment plant upsets. Throttling of influent flows to the plant resulting in avoidable, premature sewer system overflows is prohibited.

23. An average monthly flow in excess of 210 mgd shall not be considered a violation of this permit.

24. At times when the Northeast sampler equipment fails, the two samples (North and South) for the Set 1 primaries could be substituted for each other if either sampler fails; should the sample for the Set 2 primaries fail, then the sample from the backup sampler for the Set 2 primaries could be substituted for the failed sampler; and the two samples for the chlorine contact weir (North and South) could be substituted for each other should either sample fail. This substitution would apply to suspended solids and $CBOD_5$.

25. The permittee's method for conducting influent and effluent composite sampling, presented in letters to the DEP dated March 8, 2006, has been reviewed and approved by the DEP.

26. This permit may be modified or revoked and reissued, as provided pursuant to 40 C.F.R. 122.62 and 124.5, for the following reasons:

    a. To include new or revised conditions developed to comply with any State of Federal law or regulation that addresses CSOs that is adopted or promulgated subsequent to the effective date of this permit.

    b. To include new or revised conditions if new information, not available at the time of permit issuance, indicates that CSO controls imposed under the permit have failed to ensure the attainment of State Sate Quality Standards.

    c. To include new or revised conditions based on new information resulting from implementation of the long-term control plan.

    In addition, this permit may be modified or revoked and reissued for any reason specified in 40 C.F.R. 122.62.

27. Polychlorinated Biphenyls (PCBs) Requirements:

    A. On December 15, 2003, the U.S. EPA Regions 2 and 3 adopted a Total Maximum Daily Load (TMDL) for PCBs for Zones 2, 3, 4, and 5 of the tidal Delaware River. The TMDL requires that the facilities identified as discharging PCBs to the Delaware River prepare and implement a PCBs Waste Minimization and Reduction Program also known as Pollution Minimization Plan (PMP). This facility has been identified as a Group 1 discharger. Therefore, monitoring for total PCBs shall be conducted consistent with the specific requirements developed for your facility as detailed in DRBC's letter dated November 16, 2004.

    Since DRBC has approved a PMP, the permittee shall implement and submit a PMP Report annually as approved.

    The monitoring information, the PMP, and required reports shall be submitted to DEP and DRBC at the following addresses:

PA Department of Environmental Protection
Southeast Regional Office
Water Management Program
2 East Main Street
Norristown, PA 19401

Delaware River Basin Commission
Modeling/Monitoring Branch
P.O. Box 7360
West Trenton, NJ 08628

28. Combined Sewer Overflows (CSOs):

I. MANAGEMENT AND CONTROL OF CSOs:

CSOs are point source discharges that must be provided control measures to meet both technology and water quality-based standards in accordance with the Federal Clean Water Act. The point source discharges listed in Part A of the permit serve as combined sewer reliefs necessitated by stormwater entering the sewer system and exceeding the hydraulic capacity of the sewers and/or treatment plant. CSOs are allowed to discharge only when flows in combined sewer systems exceed conveyance or treatment capacities of the system during wet weather periods. Dry weather overflows are prohibited.

Water bodies receiving CSO discharges in the PWD service area covering this permit include the Tacony/Frankford Creek, Pennypack Creek, and the Delaware Estuary. All point souces of CSO discharges from the PWD sewer systems are listed in Part A of this permit

II. IMPLEMENTATION OF THE NINE MINIMUM CONTROLS:

In accordance with the U.S. EPA's National CSO Control Policy, the permittee shall implement the Nine Minimum Controls (NMCs) that are described in that policy. The NMCs are low cost technology-based actions that can reduce CSO pollutant discharges and their effects on receiving waters. (The NMCs also tend to be actions that are ongoing and perpetual in nature).

The NMCs are given in the National CSO Policy as follows:

NMC1: Proper Operation and Regular Maintenance Programs for the Sewer System and the CSOs.
NMC2: Maximum Use of the Collection System for Storage.
NMC3: Review and Modification of Pretreatment Requirements to Assure CSO Impacts are minimized.
NMC4: Maximization of Flow to the Publicly Owned Treatment Works for Treatment.
NMC5: Prohibition of CSOs during Dry Weather.
NMC6: Control of Solid and Floatable Materials in CSOs.
NMC7: Pollution Prevention.
NMC8: Public Notification to Ensure that the Public Receives Adequate Notification of CSO Occurrences and CSO Impacts.
NMC9: Monitoring to Effectively Characterize CSO Impacts and the Efficacy of CSO Controls.

The permittee's program for implementing the NMCs was first laid out in the "Documentation of the Implementation of the Nine Minimum Controls" (DINMC) report, dated September 27, 1995. Additional control measures will also be provided if determined necessary to comply with water quality standards. The permittee shall continue to implement the projects and programs as described in the DINMC report, and in addition, the permittee shall undertake a number of new initiatives to further ensure continued compliance with the intent of the nine minimum technology-based controls. These new initiatives are described in this section:

NMC1: Proper Operation and Regular Maintenance Programs for the Sewer System and the CSOs:

The permittee shall implement a comprehensive Geographic Information System (GIS) of the City sewer system to improve the operation of the collection system.

The permittee shall implement a comprehensive sewer assessment program (SAP) to provide for continued inspection and maintenance of the collection system using closed circuit television. The SAP shall be used to guide the capital improvement program to ensure that the existing sewer systems are adequately maintained, rehabilitated, and reconstructed.

NMC2: Maximum Use of the Collection System for Storage:

The permittee shall continue to institutionalize a comprehensive monitoring and modeling program to support maximizing the use of the collection system. The permittee shall continue to operate and maintain a network of permanent and temporary flow monitoring equipment to provide data to support system capacity analysis for the combined, separate, and satellite sewer systems.

The permittee shall continue to evaluate the collection system to ensure adequate transport capacity for dry and wet weather flows and continue to evaluate opportunities for operational changes that can increase the capture and treatment of combined sewage using computer-based modeling analyses, as well as design optimized operational plans for new infrastructure projects.

The permittee shall fully integrate its recently constructed real time control facility into the operations of PWD to maximize the use of the collection system to store and deliver wet weather flows to the water pollution control plants for treatment.

The permittee shall operate and maintain in-line collection storage system projects contained within the LTCP.

NMC3: Review and Modification of Pretreatment Requirements to Assure CSO Impacts are Minimized:

The permittee will expand its Industrial Pretreatment Program to include significant industrial users (SIUs) whose facilities contribute runoff to the combined sewer system. The permittee will develop procedures for the issuance, and enforcement, of general permits to SIU facilities where products, by-products, waste products, or other materials may be exposed to rainfall with the potential to contaminate runoff to the combined sewer system. These procedures and permits will be similar to the State permitting program for Industrial Stormwater Discharges in separate sewered systems. The permittee will incorporate guidance on BMPs for industrial stormwater discharges into the guidance being developed to support its new Stormwater Management Regulations.

To address numerous complaints about the operation of scrap metal and auto salvage businesses, which may cause polluted runoff to enter the permittee's sewers, as well as create blight in permittee neighborhoods, and contribute to short dumping and other environmental harms to area waterways, the permittee will: (1) continue to participate with the USEPA and PA DEP in a multi-governmental task force to conduct random inspections of these facilities; (2) provide compliance assistance to scrap yard operators on the various laws and regulations; (3) provide educational assistance on measures that can be undertaken by the industry to control runoff from storage or transport areas; and (4) where necessary, support comprehensive enforcement actions in cases where facilities are unwilling to cooperate.

NMC4: Maximization of Flow to the Publicly Owned Treatment Works for Treatment:

The permittee shall continue to analyze and implement non-capital intensive steps to maximize the wet weather flow to the POTW using the findings and follow-up investigations from the POTW Stress Test Reports.

The permittee shall continue its program to require flow reduction plans in its agreements to treat wastewater flows from satellite collections systems operated by its suburban communities where violations of contractual limits are observed. Furthermore, the permittee shall use its comprehensive monitoring and modeling program to identify suburban communities where excessive rainfall-dependent infiltration and inflow appear to be occurring, and will structure its treatment agreements with those communities so as to provide for the reduction of such rainfall-dependent flows.

NMC5: Prohibition of CSOs during Dry Weather:

The permittee will optimize its real-time control facility to identify and respond to blockages and (non-chronic) dry weather discharges.

NMC6: Control of Solid and Floatable Materials in CSOs:

The permittee will control the discharge of solids and floatables by cleaning inlets and catch basins on an as needed basis, but not less than on average, once per year.

The permittee will continue to fund and operate its Waterways Restoration Team, dedicated to removing large debris - cars, shopping carts, and other short dumped debris - from the 100 miles of stream systems that define the city's neighborhoods.

The permittee will continue to operate and maintain a floatable skimming vessel to remove floatable debris from accessible segments of the tidal CSO receiving waters.

NMC7: Pollution Prevention:

The permittee shall continue to develop and share, in conjunction with its watershed partnership stakeholders, a variety of public information materials concerning the CSO LTCP in relation to watershed education, resident stewardship, and watershed planning implementation. These materials shall include, but not be limited to fact sheets, press releases, tabletop exhibits, brochures, videos, watershed surveys, websites, reports, and presentation materials.

The permittee shall continue to maintain its watershed management and source water protection partnership websites to encourage pollution prevention. Examples of such would be:

- www.phillyrivercast.org <http://www.phillyrivercast.org>
- www.phillyriverinfo.org <http://www.phillyriverinfo.org>
- www.schuylkillactionnetwork.org <http://www.schuylkillactionnetwork.org>

The permittee shall continue to provide annual information to city residents about its programs via such traditional PWD publications as the WaterWheel newsletter, monthly bill stuffers, and its Consumer Confidence Report (CCR). The permittee will also develop and publish, via traditional printing or on-line, additional public education materials, and updates as it sees fit.

The permittee shall continue to support the Fairmount Water Works Interpretive Center.

NMC8: Public Notification to Ensure that the Public Receives Adequate Notification of CSO Occurrences and CSO Impacts:

The permittee shall launch a proactive public notification program (Early Warning System) using print, audio, video, internet media, and where accessible to the public, CSO outfall signage to indicate locations of CSOs, information on hazards, and public actions.

The permittee shall expand its internet-based notification system (River Cast) that predicts potential levels of pathogens in the Schuylkill River to the tidal section of Lower Schuylkill River, and evaluate this method for public notification of CSO impacts on recreational uses.

NMC9: Monitoring to Effectively Characterize CSO Impacts and the Efficacy of CSO Controls:

The permittee shall report on the status and effectiveness of each of the Nine Minimum Controls in the Annual CSO Status Report. The permittee shall incorporate CSO discharge characterizations in its comprehensive watershed assessment program to assess program performance.

III. IMPLEMENTATION OF THE LONG TERM CSO CONTROL PLAN

The permittee shall continue to implement the Long Term CSO Control Plan (LTCP) dated January 24, 1997, and approved by the DEP on September 18, 1997. In addition, the permittee shall update the LTCP in accordance with sub-section A below.

The 1997 LTCP included the development of a Watershed-Based Planning and Management program. Through this effort, the permittee has developed a watershed-based control program that has three broad goals:

1. LAND: Managing wet-weather flows at the source through improved land management practices.

2. WATER: Direct restoration of the aquatic habitat to support living resources.

3. INFRASTRUCTURE: The upgrade and expansion of infrastructure to further reduce CSO frequency and volume.

To the extent practicable, these programs are to be integrated to provide multiple ecological, aesthetic, and social benefits such that they attain a higher level of acceptance by the communities that bear their expense. Each of the Land, Water, and Infrastructure Program components are carried forward in the following sub-sections of this permit condition.

The DEP recognizes that the permittee's approach to long-term management and control of combined sewer overflows is integrated into a comprehensive watershed management program. The permittee is encouraged to continue to lead efforts that seek to integrate pertinent environmental federal, state, and local legislative/regulatory programs in a concurrent and holistic fashion to minimize duplication of effort and to maximize water use benefits. The permittee shall continue to implement technology-based improvements to reduce CSO volume and improve the quality of the receiving water and associated aquatic habitat according to its LTCP.

A. CSO Long Term Control Plan Update

Within PID+24 months, the permittee shall update its CSO LTCP and capital improvement program to provide additional projects that reduce CSO frequency and volume. The updated LTCP shall develop alternatives sufficient to ensure capture and treatment of sanitary sewer system flows and the elimination of all discharges from any NPDES-permitted combined sewer overflow that are not in compliance with EPA's 1994 National Combined Sewer Overflow Control Policy and the Clean Water Act. The evaluation of alternative control measures shall be consistent with the guidance provided in Chapter 3 of the Combined Sewer Overflows: Guidance for Long-Term Control Plan, Office of Water EPA 832-B-95-002, September 1995 ("Guidance for LTCP") and shall provide the following additional components:

(a) As part of the plan revision process and to support the LTCP the permittee shall maintain the capability to conduct flow monitoring and apply a hydrologic and hydraulic model of the collection system to assess the performance of the CSO control alternatives and the efficacy of implemented controls.

(b) An assessment of a range of "sizes" of each alternative considered and an evaluation of the technical applicability and feasibility of the full range of alternatives and sizes to each CSO, or each logical grouping of CSOs, in the combined sewer system. Alternatives shall include projects that:

i. Link the city's development and land management practices to achieve CSO reductions through the application of innovative stormwater management regulations and low impact development (LID) and redevelopment practices.

ii. Directly restore aquatic ecosystems through stream rehabilitation and wetland construction.

iii. Expand its collection and treatment systems to increase the capture and treatment of combined sewage and ensure adequate transport capacity for dry and wet weather flows.

(c) An assessment of the watershed wide reductions in pollutant loads achieved by the CSO controls and other controls as developed in the watershed management plans.

(d) An evaluation of the Project Costs for each alternative, or mix of alternatives, that the permittee has evaluated.

(e) The DEP understands that the permittee has been capturing and treating combined sewer flows to full secondary treatment requirements and disinfections. An analysis of the benefits of the additional treatment applied to wet-weather flow through its secondary treatment processes shall be performed and used to assess the performance of the CSO controls in the plan update.

(f) The watershed partnerships shall continue to be utilized for evaluation and prioritization of management alternatives including additional CSO controls.

B. Capital Improvement Projects

As part of its implementation of the Long Term Control Plan (1997), the permittee will carry forward its broad goal for **INFRASTRUCTURE (CSO Control Projects)** according to the following program:

The permittee shall continue to implement CSO capital improvement projects that were planned during the previous permit cycle. In addition, the permittee shall develop, propose, and implement additional capital projects to continue to increase the capture and treatment of combined sewage.

i. Capital Improvement Projects (On Going):

Real Time Control Center - The permittee shall complete and place into operation the facilities that are part of the Real Time Control Center within PID+36 months. The permittee shall rehabilitate and maintain the monitoring network with the goal of increasing the percentage of operating sites to 80 percent.

Water Pollution Control Plant (WPCP) Wet Weather Treatment Maximization - The permittee shall begin to implement the results of the Stress Testing Report dated January 2000 for the permitted treatment facility according to the following:

The permittee shall:

1. As part of the update of the CSO LTCP, the permittee shall evaluate the CSO reductions that result from the project options list contained in the stress test report.

2. By PID+12 months, the permittee shall implement the following options from the report:

   (a) Option 1 – Improve mixing in mixed liquor channel to secondary clarifiers 9 through 16.

   (b) Option 2 – Polymer addition on Set 1 secondary clarifiers to maintain effluent quality.

   (c) Option 4 – Improve step feed modes during wet weather events by converting the manual gate operators to motor driven operators.

3. By PID+60 months the permittee shall plan, design, and construct the following options from the report to increase the secondary plant capacity to 435 MGD:

   (a) Option 5 – Modify Set 2 secondary effluent channels to reduce hydraulic restrictions under high flow conditions.

   (b) Option 7 – Provide a second conduit to the Set 2 Primary clarifiers to convey additional flow to Set 2 Primary tanks.

4. By PID+18 months, the permittee shall explore increasing the preliminary treatment primary treatment and final effluent disinfection treatment capacities in excess of the existing secondary treatment capacity at the WPCP with the intention of making a showing for the diversion of a portion of the flow stream from (around) the secondary portions of the facility to increase capacity for the treatment of combined sewage during wet weather under EPA bypass 40 C.F.R. 122.41(m) regulations. The basis of the showing, as prescribed in the National CSO Control Policy, will be to demonstrate that the record shows that the secondary treatment system is properly operated and maintained; that the system has been designed to meet secondary limits for flows greater than the peak dry weather flow, plus an appropriate quantity of wet weather flow, and that it is either technically or financially infeasible to provide secondary treatment at the existing facilities for the greater amounts of wet weather flow.

   Upon approval of the showing, the permittee shall submit for approval by the DEP, a plan for capital facilities, the operating parameters, and effluent limitations necessary to achieve the goal of wet weather primary treatment capacity of 535 MGD.

5. Upon receipt of approval, the permittee shall initiate the facility planning and design for the by-pass conduit as described in Option 9 of the stress test report.

6. The status of this project will be reported to the DEP with the Annual Status Reports, and as necessary, when major work elements are completed.

85 Percent Flow Capture – The DEP acknowledges that the permittee has completed construction of facilities sufficient to achieve 85 percent capture of combined sewage as described in the 2005 Annual CSO status report. The permittee shall submit a technical report for the DEP review, which documents the approach taken and the basis for the attainment of 85 percent capture in a manner consistent with the CSO policy.

In-Line System Storage Projects – The permittee shall complete the construction and implementation of the in-line storage projects which are currently under way at Tacony Creek Park (T-14) and Rock Run Relief (R-15) within PID+48 months for T-14 and PID+36 months for R-15.

Force Majeure - The DEP recognizes that the estimated completion dates for the projects contained in this permit may not be achieved as a result of factors beyond the permittee's reasonable control such as force majeure events. Such force majeure events include, but are not limited to, weather delays, labor actions, poor or untimely performance by the permittee's contractors, changes to the construction plans, or methods of construction which could not be been reasonable foreseen by the permittee, etc. Should a force majeure event occur, the DEP may extend the estimated completion date so as to compensate the permittee for the time lost due to the force majeure event.

Completion of Infrastructure Projects – The DEP acknowledges that the completion dates contained in this permit for the Infrastructure CSO Control Projects are estimated. The permittee shall inform the DEP of all projects that are not expected to meet the estimated completion dates within 14 days of the permittee becoming aware of this fact. The permittee shall provide the DEP with a new expected completion date.

ii. **New Capital Improvement Projects**:

The permittee shall develop a list of new capital improvement projects, and will submit this list in a LTCP Update that will be submitted by PID+24 months. In developing this capital projects list, the permittee shall consider the following technologies and to extent practicable, the permittee shall prioritize control projects that provide multiple water use and ratepayer benefits:

Asset & Capacity Management Program - the permittee will begin implementation of a comprehensive asset and capacity management program (see NMC 1). This program will include the following:

(a) A Geographic Information System for mapping and managing its water, wastewater, and stormwater infrastructure.

(b) A Sewer Assessment Program (SAP) to televise a large portion of the sewer system and to develop a set of protocols to guide sewer rehabilitation and reconstruction.

(c) The permittee shall maintain a monitoring and modeling program for the collection system that allows for ongoing capacity assurance analyses, collection system modeling, and facility planning.

Inflow/Infiltration (I/I) Controls - The permittee shall continue to implement an I/I reduction program to increase conveyance and treatment capacity by conducting tide gate inflow inspection and mitigation, flow monitoring, and rainfall dependant I/I analysis, inspection of creek crossings, sonar exams and video inspections, and using this information in its Sewer Assessment Program to prioritize its wastewater capital program. (See also NMC1, NMC2, and NMC4.)

Sewer Separation - The permittee shall continue to investigate opportunities to construct new separate storm sewers to disconnect large tracts of impervious cover from the combined sewer system. Where appropriate the permittee may allow for stormwater flow to be connected directly below the combined sewer regulating chamber, so as to reduce this flow from entering the combined sewer system.

New Storage Facilities **-** The permittee shall continue to investigate the opportunities to construct, off-line CSO storage facilities to maximize existing sewer treatment capacity and increase the annual volume of CSO captured and treated.

C. Watershed-Based Management

The DEP recognizes that the permittee spent the last permit cycle demonstrating a comprehensive, watershed management planning process. The permittee has developed Integrated Watershed Management Plans for the Cobbs Creek and for the Tookany-Tacony-Frankford Creek. The permittee has also developed five-year implementation plans based on the recommendations of the Integrated Watershed Management Plans. These five-year implementation plans are available as separate documents. The permittee has already begun implementation according to these plans.

By PID+60 months, the permittee shall have continued to apply the watershed management planning process and produced an update to the watershed implementation plans to reflect implementation progress, new monitoring information, and changes to the implementation plan and schedule. The progress made with respect to implementing the watershed plans shall be documented in the annual CSO status report.

As part of its implementation of the Long Term Control Plan (1997), the permittee will carry forward its broad goals for LAND (Wet Weather Source Control) and WATER (Ecosystem Restoration and Aesthetics) according to sub-sections A and B below, and in addition will carry out other watershed projects as described in sub-section C.

i. LAND: Wet-Weather Source Control

The permittee shall develop a comprehensive Wet Weather Source Control Program that will include the promotion of LID and other structural and non-structural controls to reduce CSO volume through evaporation, transpiration, infiltration, and detained release to the combined system for treatment. The permittee shall require post-construction stormwater controls on land development and redevelopment in the combined sewer area to achieve CSO reductions. As part of the CSO control program and in a manner consistent with the recommendations of the integrated Watershed Management Plans (discussed below), the permittee shall implement the following:

Ordinance and Regulations Modifications - The permittee shall continue to review and revise stormwater management regulations to require development and redevelopment projects to provide post construction stormwater controls. The PWD will issue and enforce the newly adopted

stormwater management regulations and guidance in the CSO areas of the city for the control of the rate and volume of stormwater runoff from new (greenfield) sites, as well as sites scheduled for redevelopment. The permittee shall conduct workshops for the development community, review agencies, and engineering/architecture firms to transfer technology on low impact development and redevelopment practices and their effectiveness in reducing CSO impacts.

Implementation of Stomwater BMPs and LID - The permittee shall continue to implement best management and LID demonstration projects by:

- Fostering coordination among city agencies and actively reviewing codes and ordinances.
- Integrating demonstration projects with transportation features including pocket parks, squares, traffic circles, triangles, islands, and medians to manage stormwater.
- Promoting high profile low impact development projects to increase citizen awareness of LID benefits.
- Implementing LID practices on its facilities to demonstrate their effectiveness and lead by example.
- Evaluating the stormwater component of its rates to develop an economic plan that allocates charges based upon use of the storm sewer system and credit appropriate levels of on-site control.
- Working with other city agencies to encourage redevelopment over green-field development.
- Working with other city agencies to incorporate Green Building Technology and Water Conservation practices into development projects in the city.
- Promoting and supporting tree planting programs to reduce runoff volume and reduce heat-island effects through increased carbon sequestration.
- Implementing steep slope planning overlays and regulations.

Catch Basin Control Program - The permittee shall continue to maintain the trapped inlets so as to contribute to the prevention of sediments, oils and grease, floatable and other non-point source pollutants from being conveyed to the combined sewer system.

Impervious Cover Disconnection - The permittee shall evaluate the feasibility of separating the storm water runoff from large impervious land tracts for management and direct discharge.

Reforestation - The permittee shall work with other organizations to implement reforestation demonstration projects to provide additional tree canopy on streets and as part of development projects and through tree credits in the new stormwater management regulations. The permittee is also a partner in the DCNR Tree Vitalize Program and is working with Fairmount Park on prioritizing riparian buffer restoration and street tree planting.

ii. WATER: Ecosystem Restoration and Aesthetics

The permittee shall implement projects that will contribute to the improvement of the aesthetic and ecological integrity of CSO receiving waters. In a manner consistent with the watershed management plans, the permittee shall initiate programs and projects to directly rehabilitate aquatic habitat and monitor improvements that result as part of the monitoring requirements in Section IV of this permit. The permittee shall implement the following programs to directly restore the aquatic habitat:

Waterways Restoration Team - The permittee shall continue the assignment of a dedicated clean-up team to remove cars, shopping carts, and other debris, from CSO receiving waters. The permittee shall evaluate the capabilities of this crew in performing minor stream bank and bed repair around outfall pipes and to remove debris at these outfalls.

Stream Habitat Restoration - The permittee shall propose and implement demonstration projects to address habitat degradation by engineering the stream channels to modern day flows and directly reconstructing the aquatic habitat. The impact of this type of restoration shall be evaluated as part of the monitoring requirements in Section IV of this permit. To the extent practicable and to minimize stream encroachments, restoration projects in the stream corridor shall be implemented in conjunction with sewage facility rehabilitation and reconstruction.

Wetland Enhancement and Construction - In a manner consistent with the watershed management plan recommendations, the permittee shall propose and implement wetland enhancement and construction projects to remove pollutants, mitigate peak flow rates, reduce runoff volume, and provide considerable aesthetic, and wildlife benefits. The permittee shall evaluate cases where runoff can be separated from the combined sewer system and directed into constructed wetlands for treatment to reduce CSO volumes. Similarly, flood plain excavations to support stream restoration can become shallow marsh systems planted with emergent vegetation that is effective in treating urban runoff and should also be evaluated. Wetland projects should be constructed in conjunction with other stream restoration and infrastructure renewal projects, and to the extent practicable, utilized as part of broader wetland mitigation programs in the area.

Fish Passage Projects - The permittee shall evaluate the benefits of projects that improve migratory fish passage in a manner consistent with the watershed management plans.

Riparian Buffer Creation and Enhancement - Through its Environment, Stewardship and Education Division (ES&ED), formerly the Natural Lands Restoration and Environmental Education Program, the permittee shall continue programs for the restoration and protection of the natural lands that buffer each of the area waterways to reduce pollution, prevent erosion of the banks, provide wildlife food and cover, and shade the adjacent water, moderating temperatures for aquatic species.

iii. Other Watershed Projects:

The permittee's integrated and adaptive approach has the added benefit of meeting other stakeholder water resources needs more universally and in parallel with CSO reductions, and shall include the following programs:

River Conservation Plan - The permittee shall continue to work in partnership with local partners to complete and implement River Conservation Plans (RCPs).

Watershed Information Center - The permittee shall create a website to serve as a Watershed Information and Technology Center. The center will centrally locate technical, management and administrative tools and capabilities to support watershed planning and to provide consistency, technical validity and efficiency in application of complex tools and databases in various watershed programs. The center is also to be used to post the status of the ongoing watershed planning and project implementation.

Integrated Water Use Status Networks - The permittee shall pilot a communication and water quality monitoring network that supports the identification and analysis of water quality events to support water use status decisions (swimming, triathlons, rowing, etc.) and makes this information available in real time to the public and to water suppliers. The permittee shall evaluate the technical and fiscal needs to expand the network into additional receiving waters where recreational uses are taking place.

Interpretive Signage - The permittee shall continue to implement interpretive signage as a simple, low-cost, visual way to raise awareness, connect people to their watersheds, encourage them to protect their water resources, and identify locations of significant watershed importance. The interpretive signage should include CSO locations, creek crossings, watershed boundaries, and restoration locations.

Interpretive Centers - The permittee shall continue to support existing educational interpretive centers to educate citizens about their community and the water environment. In particular these centers explore the urban watershed and its impact on area waterways environment now and in the future. The DEP recognizes the establishment of the Fairmount Water Works Interpretive Center (FWWIC) and Environmental Education Centers in the Fairmount Park System as important examples of this educational mechanism and encourages the permittee to continue to expand programs at these centers to educate on wet weather program restoration goals.

Basin-Specific Stormwater Management Plans (ACT 167) - The permittee shall continue to support the State Act 167 Storm water Management Planning process and integrate the results of these efforts into the watershed management plans and implementation plans.

Sewage Facility Planning - The permittee shall continue to review sewage facility planning modules and downstream sewage conveyance and treatment facilities to ensure that adequate capacity exists within these systems to accommodate flow.

IV. Monitoring and Assessment

The permittee shall continue to document CSO discharges- and related data in the quarterly Special DMRs. The format for reporting of dry and wet weather overflows should follow the established format used during the last permit term until the permittee proposes and the DEP approves a revised format.

In conjunction with the annual stormwater report submitted each fiscal year, and organized on a watershed-basis, the permittee shall submit an Annual CSO Status Report documenting the status of the implementation of all actionable items contained in this permit. The annual CSO status report shall include, but not be limited to, the following information:

a. Annual summary of the frequency and volume of CSO discharges.

b. Update of the CSO frequency and volume for a typical hydrologic year.

c. Summary of the in-stream impacts and effectiveness of CSO controls and restoration projects.

d. An annual summary of the information provided in the Special DMR, including:

   i. Rainfall data - total inches (to the nearest 0.01-inch) that fell each day and month for the period of the report.

   ii. The total number of regulator inspections conducted during the period of the report.

   iii. A list of blockages (if any) corrected or other interceptor maintenance performed, including location, date, and time corrected, and any discharges to the stream observed.

e. Dry-weather overflows - for all dry weather overflows, indicate the location, date, and time discovered, date and time corrected/ceased, and action(s) taken to prevent their reoccurrence.

f. Wet-weather overflows - using calibrated models of the combined sewer system, provide a summary of the annual CSO frequency, volume, and percent capture of combined sewer flows.

g. Chronic or continuous discharges - provide the status and corrective actions taken at all sites identified as being chronic or continuous discharges, including an estimate of flow and duration.

h. Documentation showing the continued implementation of the Nine Minimum Controls.

i. Long Term Control Plan Implementation - The permittee shall submit information that describes the efforts to update and implement the CSO LTCP. The permittee shall continue to update implementation schedules as part of the Annual CSO status report.

The permittee shall continue to implement a rotating basin approach to watershed monitoring in CSO receiving waters in order to characterize the impact of CSO discharges and other pollutant/pollution sources and the efficacy of CSO controls and watershed restoration practices. This program shall apply monitoring resources as described in the Comprehensive Watershed Monitoring Program. The monitoring plan shall be periodically updated to reflect changes in watershed stressors, watershed management planning results, and ongoing regulatory water quality standards program requirements. The watershed monitoring shall quantify the improvements resulting from the ongoing implementation of watershed improvement projects. The permittee shall continue to work with and report on collaborative efforts with the DRBC to implement wet-weather management programs in the Delaware River Estuary.

29. Prohibition of Unauthorized Discharges:

Unless otherwise authorized under Part B of this permit, any discharge from a combined sewer system to the waters of U.S. or waters of the Commonwealth from any point other than a permitted treatment plant outfall or from permitted combined sewer system outfall is prohibited. In the event there is a prohibited discharge from a combined sewer conveyance system, the DEP will be notified of such discharge immediately, unless it is a minor blockage that is corrected upon discovery, and the occurrence will be reported in the quarterly special DMR. The format for reporting of dry and wet weather overflows should follow the established format used during the last permit term until the permittee proposes, and the DEP approves, a revised format.

Re 30 (CD05)118D